

ANN BAVENDER*
JAMES A. CASEY
KAREN L. CASSER*
ANNE GOODWIN CRUMP*
VINCENT J. CURTIS, JR.
PAUL J. FELDMAN*
ERIC FISHMAN*
RICHARD HILDRETH
EDWARD W. HUMMERS, JR.
FRANK R. JAZZO
CHARLES H. KENNEDY*
KATHRYN A. KLEIMAN
PATRICIA A. MAHONEY
M. VERONICA PASTOR*
GEORGE PETRUTSAS
LEONARD R. RAISH
JAMES P. RILEY
MARVIN ROSENBERG
KATHLEEN VICTORY*
HOWARD M. WEISS

* NOT ADMITTED IN VIRGINIA

FLETCHER, HEALD & HILDRETH, P.L.C.

ATTORNEYS AT LAW

11th FLOOR, 1300 NORTH 17th STREET

ROSSLYN, VIRGINIA 22209-3801

(703) 812-0400

TELECOPIER

(703) 812-0486

INTERNET

HILDRETH@ATTMAIL.COM

ROBERT L. HEALD
(1958-1983)
PAUL D. P. SPEARMAN
(1936-1982)
FRANK ROBERSON
(1936-1981)
RUSSELL ROWELL
(1948-1977)

RETIRE
EDWARD F. KENEHAN
FRANK U. FLETCHER

CONSULTANT FOR INTERNATIONAL AND
INTERGOVERNMENTAL AFFAIRS
SHELDON J. KRYSS
U. S. AMBASSADOR (ret.)

OF COUNSEL
EDWARD A. CAINE*

WRITER'S NUMBER
(703) 812-

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

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July 10, 1995

VIA HAND DELIVERY

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W. - Room 222
Washington, D.C. 20554

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Re: RM-8658 and RM-8653

Dear Mr. Caton:

On behalf of Harris Corporation-Farion Division, we are filing an original and seven (7) copies of its Comments in the above-referenced matter.

If there are any questions, please communicate with the undersigned counsel.

Respectfully submitted,

FLETCHER, HEALD & HILDRETH, P.L.C.

Leonard Robert Raish

Leonard Robert Raish
Counsel for Harris Corporation - Farion
Division

LRR:cej
Enclosures

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BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

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JUL 10 1995

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matters of)

(1) Petition for Rulemaking To Allocate)
the 5.1 - 5.35 GHz Band and Adopt)
Service Rules for a Shared Unlicensed)
Personal Radio Network)

RM -8648

(2) Allocation of Spectrum in the 5 GHz)
Band To Establish a Wireless)
Component of the National Information)
Infrastructure)

RM-8653

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To: The Commission

**COMMENTS OF
HARRIS CORPORATION - FARINON DIVISION**

Harris Corporation - Farinon Division ("Harris"), through its attorneys, submits the consolidated comments below on the above cited two petitions.¹ Generally, Harris supports the concept of establishing a new high-speed, high bandwidth, unlicensed radio service and its harmonization with the HIPERPLAN being developed in Europe. Harris has, however, certain concerns about the point-to-point link aspects involved in both Petitions and questions the desirability of permitting unlicensed operations of more than a very local nature.

¹By its Order Extending Time in the matter of RM-8648 released June 8, 1995, the Commission recognized the practicality of consolidating comments on both RM-8648 and RM-8653 into a single set of comments. A Comment deadline of July 10, 1995 was established for those comments.

I. GENERAL

Harris is a Florida corporation with its headquarters located in Melbourne, Florida. Through its Farinon Division, located in San Carlos, California, Harris designs, develops and manufactures microwave and multiplex systems used by licensees in the terrestrial fixed microwave service. Harris is one of the largest suppliers of microwave equipments in the global market. As a leading manufacturer of equipment used in the terrestrial fixed services, Harris is interested in advancing the state-of-the-art in microwave technology and to maximize the use of frequency bands made available for the microwave services.

II. CONCEPT FOR WIRELESS NETWORKS SUPPORTED BUT ACTUAL IMPLEMENTATION WILL REQUIRE MORE CONSIDERATION

Harris, as a matter of principle, encourages the development of new radio communications technologies. The proposals in both Petitions introduce new service that can benefit the American public. Harris notes, however, the many of the essential details on how these technologies would function are left to future consideration. WINFORUM "believes" that SUPERNET access rules should be developed "on the basis of consensus among those in the industry." Apple also refers to the need for "rules." Prior to proceeding to Rulemaking, Harris recommends the Commission should prepare rules for adaption that would assure the public interest will be best served by the new services being put forward in the above cited Petitions.

III. THE 5 GHZ BAND MUST NOT BE USED FOR SHORT HAUL POINT-TO-POINT COMMUNICATIONS

The envisaged wireless networks would be unlicensed to allow for new entrants to appear eventually and operate in a given area, power levels should be such as to limit operations to an area of about one kilometer. Power levels sufficient to extend communications operations up to 10 to

15 kilometers in an unlicensed mode could cause serious harmful interference problems. If higher powers are permitted costly filtering requirements will have to be imposed that would defeat the purpose of establishing cost effective local area networks. The "open entry" capability of the proposed band would become seriously limited with new entrants being kept out of an area by existing interference levels.

Harris would also underscore the importance of the 5 GHz band as a valuable national resource. For some time the Commission has limited the use of spectrum below 10 GHz for short paths. Instead the Commission has allocated spectrum in the 18 GHz, 23 GHz, and 38 GHz bands for use on short paths and manufacturers have been producing equipment for this purpose. Harris urges, therefore, that in accommodating unlicensed local wireless networks in the 5 GHz band that the point-to-point services needed to support those local networks be in separate higher bands where the spectrum usage would be coordinated, licensed, and where power authorizations would be sufficient to provide the desired service. Operations of point-to-point services to support the unlicensed local networks for distances beyond one kilometer would be this category. Within the one kilometer limitation unlicensed mobile and transportable networks, generally described as local area networks, could function provided EIRP limitations are established to protect equal access to all who desire to enter the unlicensed band.

IV. HARMONIZATION WITH HIPERPLAN IS APPLAUDED

Harris, being a major exporter of telecommunications products, applauds the observation in both Petitions that their systems will be compatible with spectrum allocations for the European HIPERPLAN. Clearly, this approach can benefit U.S. manufacturers engaged in export. In the past, Harris has continuously promoted the concept of worldwide frequency band harmonization.

**V. EXISTING MICROWAVE POINT-TO-POINT BANDS
WILL IDEALLY COMPLEMENT NII BAND OPERATIONS**

Reading into both Petitions is the premise that microwave links will be important to support successfully the network operations being envisaged, e.g., (1) linking of community networks to each other and (2) providing access from any given network to the main telephone access infrastructure in the area of its operation. The 18, 23, and 38 GHz bands have specifically been allocated by the Commission for such short haul, low, medium, or high capacity applications.

**VI. MORE STUDIES REQUIRED ON SHARING
WITH OTHER SERVICES**

As stated already, the 5 GHz band is considered to be "valuable" spectrum. Note is taken that Apple proposes two bands totaling 300 MHz be allocated (5150-5300 and 5725-5875 MHz bands) for the NII Band service. On the other hand, WINFORUM proposes 5100-5350 MHz, i.e., a 250 MHz allocation in one contiguous band. Harris recommends from a spectrum management standpoint, the WINFORUM proposal could be preferable.

As a related point, both Apple and WINFORUM maintain the services they propose can co-share with MSS feeder links being proposed to WRC-95 for the 5 GHz band and with Government radar systems already authorized in the band. Although neither demonstrates how this could be done, the WINFORUM proposal for a single 250 MHz allocation at 5100-5350 MHz would appear to simplify the issue.

VII. CONCLUSION

Noting the premises stated herein above, the Commission is encouraged to proceed to rulemaking action. Particular emphasis is placed on the need for the Commission to propose specific rules to replace many of the generalities in the two Petitions and for the microwave links that would support the Unlicensed services to be in bands at 18 GHz and above. In general, establishment of high EIRP limits in unlicensed bands should be discouraged.

Respectfully submitted,

HARRIS CORPORATION-FARINON
DIVISION

By: 
Leonard Robert Raish

Its Attorney

FLETCHER, HEALD & HILDRETH, P.L.C.
1300 North 17th Street
11th Floor
Rosslyn, Virginia 22209
(703) 812-0400

Dated: July 10, 1995
CEJ/LRR/R#4/HARRIS-PLEADING